

REMARKS

Claims 1-3 and 5-11 are pending, claims 12-28 being withdrawn as directed to a non-elected invention, and claim 4 being cancelled herein.

Applicant is pleased to note that the Examiner has indicated that claims 6-11 are directed to patentable subject matter.

Claims 6-11 stand rejected under 35 U.S.C. §112, first paragraph as allegedly failing to comply with the enablement requirement. Applicant respectfully traverses this rejection. What is meant by a “gap-crossing-move” is clearly recited both in the claims and in the specification. In particular, as pointed out by the examiner, a series of conditions that are used to detect a gap-crossing-move is provided, both in claim 6 itself. Moreover, at least at paragraphs [0054-0060] the conditions are given, along with an explanation why one might want to detect such a move and how to perform the described control method when such a move is detected. The conditions recited in claim 6 (equations 7-9 in col. 4 and 10 in col. 5) provide a mathematical definition of the term and one of ordinary skill in the art would be able to perform the described detection and to prolong the appropriate sub-trajectories as described in paragraph [0060] when a gap-crossing-move is detected. Applicant submits that the mathematical definition is sufficient for one of ordinary skill in the art and that no additional definition is required or desirable.

Claims 1-5 stand rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Yuan in view of Curey.

Claim 1 has been amended to incorporate the subject matter of claim 4 and claim 4 has been cancelled. Claim 5 has been amended to depend from claim 1 in view of the cancellation of claim 4.

Applicant respectfully submits that the Office Action has failed to set forth a *prima facie* case of obviousness at least with respect to the subject matter of claims 1 and 4. With respect to claim 1, there is no allegation in the Office Action that Yuan or Curey teaches or suggests that the specified trajectory provides the shortest connection in time between a first and second state as recited. Likewise, with respect to claim 4, there is no allegation that either reference alone or the combination of references teaches each and every element recited, instead stating that the references teach a method “which is similar to the steps of claim 4.” In addition to the specific differences between claim 4 and the art cited described below, applicant respectfully submits that “similar” is not sufficient to establish a *prima facie*

case of obviousness as “all the claim limitations must be taught or suggested by the prior art.” MPEP § 2143.03 (internal citations omitted).

Applicant respectfully submits that claim 4 (and therefore amended claim 1) is patentable at least because neither Yuan nor Curey teaches or suggests calculating sub-trajectories for each of a number of dimensions of at least position and orientation, selecting a sub-trajectory having the largest connection time, prolonging non-selected sub-trajectories to the connection time of the selected sub-trajectory, and generating a trajectory by combining the selected and prolonged sub-trajectories. Yuan merely teaches that by maintaining a continuous jerk function, vibration may be reduced. It does not teach any methodology for composing a trajectory based on sub-trajectories, nor does it teach anything about prolonging certain of the sub-trajectories and combining the selected and prolonged sub-trajectories. Likewise, Curey fails to overcome this deficiency of Yuan. Paragraph [0026] of Curey merely describes adjusting actual maxima for theoretically normal operating maxima when the normal operating maxima fail to be achieved. This is not defining a trajectory based on particular sub-trajectories and prolonged sub-trajectories as recited in amended claim 1.

With respect to claim 5, the Office Action relies on an inherency argument and states that the recited equations are “a form of a standard equation of motion.” First, applicant submits that “in relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied prior art.” (See MPEP § 2112 citing Ex Parte Levy, 17 U.S.P.Q. 2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)). Furthermore, applicant respectfully disagrees with the characterization of claim 5 and notes that claim 5 defines more than a standard equation of motion. The equations of claim 5 define particular parameters for two different potential sub-trajectories of the substrate based on maximum values for acceleration and jerk (A and J) and further based on a time parameter that is in turn based on a maximum velocity (V) as well as the particular start and end states. Clearly this approach does not necessarily flow from either Yuan or Curey as required by the rules on inherency. Moreover, nothing in either Yuan or Curey teaches the method as claimed, nor suggests how to select between a sub-trajectory of a first kind or a second kinds as recited in claim 5. Applicant respectfully requests that the rejection of claims 1-5 based on 35 U.S.C. §103(a) be withdrawn.

In view of the foregoing, applicant respectfully submits that the claims are in condition for allowance and requests a notice to that effect.

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